

## **Remarks**

Applicant respectfully requests reconsideration of the rejections in view of the foregoing amendments and the following remarks. Claims 1, 2, 7-9 and 18-27 remain pending. New claims 24-27 are provided herein and support for them may be found throughout the specification, particularly at page 16, lines 1-2.

### **I. Rejections under 35 USC §112, second paragraph**

The prior set of claims stood rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Patent Office has objected to certain phrases as lacking clarity or having proper antecedent basis. It is believed that Applicants have clarified the now pending claims to remove these objections and respectfully requests withdrawal of this rejection. In particular, the use of the word “gene” although believe to be clearly defined in the specification, has been changed to “structural DNA sequence encoding” support for which can be found throughout the specification including on page 6 of the specification. Clarification has been made to the reference to the vessel as containing media wherein the media does not contain a gelling agent. Although the word “fertile” has been removed from the claims to clarify the claim, it is submitted that one can and would regenerate a “fertile” plant from the regenerable plant cell or tissue used as the explant and that one of ordinary skill in the art would inherently use such an explant in order to provide a useful end product. An infertile plant would not be useful as it could not be propagated to the next generation in a cost-efficient manner. The rejections to Claim 22 arose due to an apparent computer malfunction where words intended in the prior amendment to be deleted were not marked as such. Applicant regrets this error and provides an amended claim herein. Applicant has further amended the independent claims to recited a range of reduced weight of the explant of from about 20% to about 35%. Support for this amendment may be found in the specification particularly on page 21, lines 18-19 and in Example 2, Table 3 on page 22.

### **II. Rejections under 35 USC §102**

The Patent Office has maintained two separate rejections of the prior set of claims under Section 102(b). Each of these rejections is respectfully traversed and reconsideration requested in view of the newly amended claims and the following remarks.

Claims 1, 2, 7-9 and 18-23 stand rejected as being anticipated by Chee et al. Contrary to the Examiner’s assertion, Chee cannot and does not anticipate the claimed invention. Chee does not describe any

soybean explant other than specific regions of a soybean cotyledon whereas the claimed invention specifically claims soybean hypocotyls or soybean callus cell suspension cultures as it pertains to soybean. Cotyledons are botanically distinct from hypocotyls and callus cell suspension cultures. Please see the Exhibit A from Applicant's prior response that clearly identify that they are not identical to nor disclosed in Chee. The Examiner's attention is also directed to Fig. 2 on page 107 of the Chee reference where the only part of the soybean cotyledon identified as being suitable for transformation is between the arrows. Furthermore, the Chee protocol is more fully described on page 107 (paragraph 4 in Section 3.1) as "inoculations are done at three different points (between the arrows shown in Fig. 2) by forcing a 301/2-gage needle into the plumule, cotyledonary node, and adjacent regions..." indicating that the three recited areas (plumule, cotyledonary node, and adjacent regions) are all between the arrows of Fig. 2 and all are on the cotyledon. Furthermore, the Examiner's attention is drawn to p 118 of the Chee reference where the term "adjacent regions" is further clarified as being "adjacent cotyledonary tissues". Thus it is clear that Chee does not disclose soybean hypocotyls or soybean callus cell suspension cultures. Moreover, Chee et al does not disclose any means for reducing the weight of the explant by limiting or reducing the moisture conditions to which the explant is exposed. The Examiner also asserts that the method of Chee results in "water evaporation and therefore decrease in weight" but does not provide any citation to anywhere in Chee where that was stated, suggested or described. This appears to be the opinion of the Examiner and Applicant respectfully requests that the Examiner provide a declaration under 37 CFR 1.104(d)(2) to support such opinion. As such, Chee cannot anticipate the invention of claim 1 or any other claim and does not disclose the presently claimed invention. This rejection must be withdrawn.


Claims 1, 2 7-9 and 18-23 also stand rejected as being anticipated by Somerville et al (US 568292). The Examiner has again directed Applicants' attention to columns 26, lines 1-3. It is respectfully submitted that the Examiner has either misinterpreted the disclosure on column 26, lines 1-3 or at least failed to read it in its full context. Applicants draw the Examiner's attention to column 25 beginning at lines 61 where it is disclosed that the explant (the axenic leaf pieces) "were transferred to No. 3 medium (MS salts, 30g/L sucrose, 1.2μM thiamine, 0.56 mM myoinositol, 1μM indole-3-acetic acid, 10 μM benzylaminopurine, 2.5 mM MES and adjusted to pH 5.6 and solidified with 0.65% agar)..." but there is no reference or disclosure that the explant was at any time removed from this gel based media while being inoculated with the Agrobacterium. In fact, the only logical interpretation of the continuing statement in Column 26, lines 3-5 make sense is that the leaf pieces remained in No. 3 media at all times until moved to a modified No. 3 media containing antibiotics. As referenced in these sections, it is clear that Somerville describes a transformation process that utilizes a gel based media throughout the process and no co-culture step without such a media is

described. Thus, Somerville cannot be said to disclose each element of the claimed invention. The Examiner asserts that Applicant is making a "conclusionary statement". To the contrary, Applicant is pointing to the teachings in the cited reference that clearly contradict the Examiner's erroneous conclusion. This rejection must, therefore, be withdrawn.

**Conclusion**

In view of the above, each of the presently pending claims is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass this application to issue. Applicant invites the Examiner to call the undersigned for clarification on any aspect of this response or if the Examiner believes that a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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